EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	0	pyruvate adj decarboxylase and etanol and yeast and gene and bacillus	US-PGPUB; USPAT; DERWENT	OR	ON	2006/08/04 16:23
L2	0	pyruvate adj decarboxylase and etanol	US-PGPUB; USPAT; DERWENT	OR	ON	2006/08/04 16:23
L3	3478	pyruvate adj decarboxylase and ethanol	US-PGPUB; USPAT; DERWENT	OR	ON	2006/08/04 16:23
L4	1073	l3 and gene and bacillus	US-PGPUB; USPAT; DERWENT	OR	ON	2006/08/04 16:25
L5	924	l3 and gene and bacillus and alcohol adj dehydrogenase	US-PGPUB; USPAT; DERWENT	OR	ON	2006/08/04 16:26
L6	431	l5 and gram-positive	US-PGPUB; USPAT; DERWENT	OR	ON	2006/08/04 16:27
L7	29	l5 and gram-positive and lactate adj dehydrogenase	US-PGPUB; USPAT; DERWENT	OR	ON	2006/08/04 16:27

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                  and display fields
 NEWS 12  JUN 28  Price changes in full-text patent databases EPFULL and PCTFULL
 NEWS 13  JUl 11  CHEMSAFE reloaded and enhanced
 NEWS 14  JUl 14  FSTA enhanced with Japanese patents
 NEWS 15  JUl 19  Coverage of Research Disclosure reinstated in DWPI

 NEWS EXPRESS  JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.

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                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.21       0.21

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=> s ethanol and yeast and gene
L1         3636 ETHANOL AND YEAST AND GENE

=> s l1 and bacillus
L2           90 L1 AND BACILLUS
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=> s l2 and pyruvate (w) decarboxylase
L3 7 L2 AND PYRUVATE (W) DECARBOXYLASE

=> d ibib abs l3 1-7

L3 ANSWER 1 OF 7 MEDLINE on STN
ACCESSION NUMBER: 2005658391 MEDLINE
DOCUMENT NUMBER: PubMed ID: 16339947
TITLE: Construction and expression of an ethanol production operon in Gram-positive bacteria.
AUTHOR: Talarico Lee A; Gil Malgorzata A; Yomano Lorraine P; Ingram Lonnie O; Maupin-Furlow Julie A
CORPORATE SOURCE: Department of Microbiology and Cell Science, University of Florida, Gainesville, FL 32611-0700, USA.
SOURCE: Microbiology (Reading, England), (2005 Dec) Vol. 151, No. Pt 12, pp. 4023-31.
Journal code: 9430468. ISSN: 1350-0872.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200602
ENTRY DATE: Entered STN: 18 Dec 2005
Last Updated on STN: 1 Mar 2006
Entered Medline: 28 Feb 2006
AB Pyruvate decarboxylase (PDC), an enzyme central to homoethanol fermentation, catalyses the non-oxidative decarboxylation of pyruvate to acetaldehyde with release of carbon dioxide. PDC enzymes from diverse organisms have different kinetic properties, thermal stability and codon usage that are likely to offer unique advantages for the development of desirable Gram-positive biocatalysts for use in the ethanol industry. To examine this further, pdc genes from bacteria to yeast were expressed in the Gram-positive host Bacillus megaterium. The PDC activity and protein levels were determined for each strain. In addition, the levels of pdc-specific mRNA transcripts and stability of recombinant proteins were assessed. From this analysis, the pdc gene of Gram-positive Sarcina ventriculi was found to be the most advantageous for engineering high-level synthesis of PDC in a Gram-positive host. This gene was thus selected for transcriptional coupling to the alcohol dehydrogenase gene (adh) of Geobacillus stearothermophilus. The resulting Gram-positive ethanol production operon was expressed at high levels in B. megaterium. Extracts from this recombinant were shown to catalyse the production of ethanol from pyruvate.

L3 ANSWER 2 OF 7 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2006:151966 BIOSIS
DOCUMENT NUMBER: PREV200600152190
TITLE: Construction and expression of an ethanol production operon in Gram-positive bacteria.
AUTHOR(S): Talarico, Lee A.; Gil, Malgorzata A.; Yomano, Lorraine P.; Ingram, Lonnie O.; Maupin-Furlow, Julie A. [Reprint Author]
CORPORATE SOURCE: Univ Florida, Dept Microbiol and Cell Sci, Gainesville, FL 32611 USA
jmaupin@ufl.edu
SOURCE: Microbiology (Reading), (DEC 2005) Vol. 151, No. Part 12, pp. 4023-4031.
ISSN: 1350-0872.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 1 Mar 2006
Last Updated on STN: 1 Mar 2006
AB Pyruvate decarboxylase (PDC), an enzyme central to homoethanol fermentation, catalyses the non-oxidative decarboxylation of

pyruvate to acetaldehyde with release of carbon dioxide. 1 enzymes from diverse organisms have different kinetic properties, thermal stability and codon usage that are likely to offer unique advantages for the development of desirable Gram-positive biocatalysts for use in the ethanol industry. To examine this further, pdc genes from bacteria to yeast were expressed in the Gram-positive host Bacillus megaterium. The PDC activity and protein levels were determined for each strain. In addition, the levels of pdc-specific mRNA transcripts and stability of recombinant proteins were assessed. From this analysis, the pdc gene of Gram-positive Sarcina ventriculi was found to be the most advantageous for engineering high-level synthesis of PDC in a Gram-positive host. This gene was thus selected for transcriptional coupling to the alcohol dehydrogenase gene (adh) of Geobacillus stearothermophilus. The resulting Gram-positive ethanol production operon was expressed at high levels in B. megaterium. Extracts from this recombinant were shown to catalyse the production of ethanol from pyruvate.

L3 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2006:17838 CAPLUS
DOCUMENT NUMBER: 144:405166
TITLE: Construction and expression of an ethanol production operon in Gram-positive bacteria
AUTHOR(S): Talarico, Lee A.; Gil, Malgorzata A.; Yomano, Lorraine P.; Ingram, Lonnie O.; Maupin-Furlow, Julie A.
CORPORATE SOURCE: Department of Microbiology and Cell Science, University of Florida, Gainesville, FL, 32611-0700, USA
SOURCE: Microbiology (Reading, United Kingdom) (2005), 151(12), 4023-4031
CODEN: MROBEO; ISSN: 1350-0872
PUBLISHER: Society for General Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Pyruvate decarboxylase (PDC), an enzyme central to homoethanol fermentation, catalyzes the non-oxidative decarboxylation of pyruvate to acetaldehyde with release of carbon dioxide. PDC enzymes from diverse organisms have different kinetic properties, thermal stability and codon usage that are likely to offer unique advantages for the development of desirable Gram-pos. biocatalysts for use in the ethanol industry. To examine this further, pdc genes from bacteria to yeast were expressed in the Gram-pos. host Bacillus megaterium. The PDC activity and protein levels were determined for each strain. In addition, the levels of pdc-specific mRNA transcripts and stability of recombinant proteins were assessed. From this anal., the pdc gene of Gram-pos. Sarcina ventriculi was found to be the most advantageous for engineering high-level synthesis of PDC in a Gram-pos. host. This gene was thus selected for transcriptional coupling to the alc. dehydrogenase gene (adh) of Geobacillus stearothermophilus. The resulting Gram-pos. ethanol production operon was expressed at high levels in B. megaterium. Exts. from this recombinant were shown to catalyze the production of ethanol from pyruvate.
REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1992:649986 CAPLUS
DOCUMENT NUMBER: 117:249986
TITLE: Ethanol production by by bacteria carrying foreign genes for alcohol dehydrogenase and pyruvate decarboxylase
INVENTOR(S): Ingram, Lonnie O.; Beall, David S.; Burchhardt, Gerhard F. H.; Guimaraes, Walter V.; Ohta, Kazuyoshi;

Wood, Brent E.; Shanmugam, Keelnatham T.; Fowler, David A.; Ben-Bassat, Arie

PATENT ASSIGNEE(S): University of Florida, USA; Bioenergy International, L.C.

SOURCE: PCT Int. Appl., 153 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 10

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9216615	A1	19921001	WO 1992-US1807	19920318
W: AT, AU, BB, BG, BR, CA, CH, CS, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MG, MN, MW, NL, NO, PL, RO, RU, SD, SE, US				
RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GN, GR, IT, LU, MC, ML, MR, NL, SE, SN, TD, TG				
US 5424202	A	19950613	US 1992-846344	19920306
AU 9217794	A1	19921021	AU 1992-17794	19920318
AU 672748	B2	19961017		
CN 1070424	A	19930331	CN 1992-101877	19920318
CN 1065915	B	20010516		
EP 576621	A1	19940105	EP 1992-910933	19920318
EP 576621	B1	20010228		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE				
JP 06505875	T2	19940707	JP 1992-509941	19920318
JP 3457664	B2	20031020		
BR 9205782	A	19940726	BR 1992-5782	19920318
AT 199389	E	20010315	AT 1992-910933	19920318
NO 9303178	A	19931108	NO 1993-3178	19930907
NO 315567	B1	20030922		
CN 1342773	A	20020403	CN 2000-131779	20001020
AU 2005248924	A1	20060202	AU 2005-248924	20051223

PRIORITY APPLN. INFO.:

US 1991-670821	A	19910318
US 1992-846344	A	19920306
US 1988-239099	B2	19880831
US 1989-352062	A2	19890515
US 1990-624277	B2	19901207
WO 1992-US1807	A	19920318
AU 2002-35569	A3	20020419

AB Bacterial hosts, excluding Escherichia coli, expressing heterologous genes for alc. dehydrogenase (I) and pyruvate decarboxylase (II) are used for manufacture of EtOH. II is used to prevent accumulation of acid metabolites. Plasmids, e.g. pLOI555 carrying genes for I and II of Zymomonas mobilis driven by the lac promoter, are provided for preparation of the host. The method is further improved by transforming the host with genes for proteins that facilitate transport and metabolism of oligosaccharides, e.g., of C5-6 sugars, which host is, preferably, also expressing a heterologous gene for a polysaccharase such as a cellulolytic enzyme, a xylanolytic enzyme, or a starch-degrading enzyme. These hosts also preferably express heterologous genes for polysaccharide- degrading enzymes (e.g. those degrading cellulose, xylans, or starch). A cost-effective fermentation process for manufacturing EtOH from oligosaccharide feedstocks using a single, genetically engineered microorganism is also disclosed. An ethanologenic strain Klebsiella oxytoca M5A1(pLOI555) was prepared and was further transformed with plasmid pLOI2003 encoding xylanase (gene xynZ) and xylosidase (gene xylB) of Clostridium thermocellum to obtain a transformant capable of converting xylan to EtOH.

L3 ANSWER 5 OF 7 LIFESCI COPYRIGHT 2006 CSA on STN

ACCESSION NUMBER: 2006:26910 LIFESCI

TITLE: Construction and expression of an ethanol

production operon in Gram-positive bacteria
AUTHOR: Talarico, Lee A.; Gil, Malgorzata A.; Yomano, Lorraine P.; Ingram, Lonnie O.; Maupin-Furlow, Julie A.
CORPORATE SOURCE: Department of Microbiology and Cell Science, University of Florida, Gainesville, FL 32611-0700, USA; E-mail: jmaupin@ufl.edu
SOURCE: Microbiology, (20051200) vol. 151, no. 12, pp. 4023-4031. ISSN: 1350-0872.
DOCUMENT TYPE: Journal
FILE SEGMENT: W2; J
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Pyruvate decarboxylase (PDC), an enzyme central to homoethanol fermentation, catalyses the non-oxidative decarboxylation of pyruvate to acetaldehyde with release of carbon dioxide. PDC enzymes from diverse organisms have different kinetic properties, thermal stability and codon usage that are likely to offer unique advantages for the development of desirable Gram-positive biocatalysts for use in the ethanol industry. To examine this further, pdc genes from bacteria to yeast were expressed in the Gram-positive host Bacillus megaterium. The PDC activity and protein levels were determined for each strain. In addition, the levels of pdc-specific mRNA transcripts and stability of recombinant proteins were assessed. From this analysis, the pdc gene of Gram-positive Sarcina ventriculi was found to be the most advantageous for engineering high-level synthesis of PDC in a Gram-positive host. This gene was thus selected for transcriptional coupling to the alcohol dehydrogenase gene (adh) of Geobacillus stearothermophilus. The resulting Gram-positive ethanol production operon was expressed at high levels in B. megaterium. Extracts from this recombinant were shown to catalyse the production of ethanol from pyruvate.

L3 ANSWER 6 OF 7 LIFESCI COPYRIGHT 2006 CSA on STN
ACCESSION NUMBER: 84:75038 LIFESCI
TITLE: Xylose-isomerase in yeast.
AUTHOR: Wilhelm, M.; Erhart, E.; Hollenberg, C.P.
CORPORATE SOURCE: Inst. Mikrobiol., Univ. Duesseldorf, Duesseldorf, FRG
SOURCE: RIV. BIOL., (1984) vol. 77, no. 4, pp. 607-608. Meeting Info.: International Course on Microbial Breeding. Spoleto (Italy). 3-8 Sep 1984.
DOCUMENT TYPE: Journal
TREATMENT CODE: Conference
FILE SEGMENT: G; W; N; K
LANGUAGE: English
AB Saccharomyces cerevisiae is not able to ferment xylose to ethanol . To explore the feasibility of constructing yeast strains that can produce ethanol from xylose, the authors have decided to introduce a xylose isomerase gene into S. cerevisiae under control of the yeast pyruvate decarboxylase promoter and to study the effects of its expression. As a first step the authors have isolated a BamHi fragment from Bacillus subtilis which carries the genetic information for xylose isomerase and exlyulokinase.

L3 ANSWER 7 OF 7 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2005583341 EMBASE
TITLE: Construction and expression of an ethanol production operon in Gram-positive bacteria.
AUTHOR: Talarico L.A.; Gil M.A.; Yomano L.P.; Ingram L.O.; Maupin-Furlow J.A.
CORPORATE SOURCE: J.A. Maupin-Furlow, Department of Microbiology and Cell Science, University of Florida, Gainesville, FL 32611-0700, United States. jmaupin@ufl.edu

SOURCE: Microbiology, (2005) Vol. 151, No. 12, pp. 4023-4031. .
Refs: 35
ISSN: 1350-0872 CODEN: MROBEO
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 12 Jan 2006
Last Updated on STN: 12 Jan 2006

AB Pyruvate decarboxylase (PDC), an enzyme central to homoethanol fermentation, catalyses the non-oxidative decarboxylation of pyruvate to acetaldehyde with release of carbon dioxide. PDC enzymes from diverse organisms have different kinetic properties, thermal stability and codon usage that are likely to offer unique advantages for the development of desirable Gram-positive biocatalysts for use in the ethanol industry. To examine this further, pdc genes from bacteria to yeast were expressed in the Gram-positive host Bacillus megaterium. The PDC activity and protein levels were determined for each strain. In addition, the levels of pdc-specific mRNA transcripts and stability of recombinant proteins were assessed. From this analysis, the pdc gene of Gram-positive Sarcina ventriculi was found to be the most advantageous for engineering high-level synthesis of PDC in a Gram-positive host. This gene was thus selected for transcriptional coupling to the alcohol dehydrogenase gene (adh) of Geobacillus stearothermophilus. The resulting Gram-positive ethanol production operon was expressed at high levels in B. megaterium. Extracts from this recombinant were shown to catalyse the production of ethanol from pyruvate. .COPYRGT. 2005 SGM.

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CA SUBSCRIBER PRICE	-1.50	-1.50

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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Jul 28, 2006 (20060728/UP).